

**WHAT IS CLAIMED IS:**

1. Cover for sealing a container comprising:
  - at least one bottom layer and at least one top layer arranged over said bottom layer; and
- 5        - the bottom and second layer each comprising a structure to form a recloseable aperture of the cover and allowing to access through the layers into the container.
2. The cover of claim 1, wherein at least one of the said bottom layer and top layer comprises at least one of: a recloseable aperture, a flap, and
- 10        a butterfly valve.
3. The cover of claim 2, wherein said flap or said butterfly valve is formed by a U-shaped cut in the layer.
4. The cover of claim 3, wherein a bending fold axis of said flap or butterfly valve of the at least one bottom layer is not arranged over a bending
- 15        fold axis of said flap or butterfly valve of the at least one top layer.
5. The cover of claim 1, wherein at least one of the at least one bottom and the at least one top layer comprises a cross-shaped cut thereby forming a butterfly valve.
6. The cover of claim 5, wherein the cross-shaped cut of the at least one
- 20        top layer is arranged with an offset of approximately 45° to the cross-shaped cut of the at least one bottom layer.
7. The cover of claim 1, wherein at least the top layer comprises a diaphragm-like recloseable aperture.
8. The cover of claim 1, wherein the bottom and top layer are glued together
- 25        by polymerization.

9. The cover of claim 1, wherein the bottom layer is laminated at least partly onto the top layer.
10. The cover of claim 1, further comprising a movable third layer arranged between the at least one bottom layer and the at least one top layer for closing an aperture in the bottom and second layer.  
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11. The cover of claim 10, wherein said third layer is structured to form a sliding valve.
12. The cover of claim 10, wherein the third layer comprises means for moving the third layer for closing the aperture of the cover.
- 10 13. The cover of claim 10, wherein the cover comprises a seal arranged at least between the third movable layer and the at least one bottom layer in the area of the recloseable aperture.
14. The cover of claim 1, wherein the seal comprises at least one of the following materials: Teflon or one of its co-polymers, Silicone, PTFE.
- 15 15. The cover of claim 1, wherein the recloseable aperture is ring-shaped, elliptical or approximately rectangular.
16. The cover of claim 1, wherein at least one layer comprises polyimide or polyimide or polyester or liquid crystal polymer.
17. The cover of claim 1, wherein the top layer comprises an electrically  
20 conductive coating layer.
18. The cover of claim 1, wherein the top layer comprises a metal coating layer.
19. The cover of claim 1, wherein the cover thickness is smaller than 400  $\mu\text{m}$ .

20. The cover of claim 1, wherein the recloseable aperture of the cover comprises an area smaller than 60 mm<sup>2</sup>.
21. The cover of claim 1, comprising a plurality of recloseable apertures for sealing a well plate, said well plate comprising a plurality of containers for a liquid.  
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22. The cover of claim 21, wherein the cover is glued onto the well plate.
23. The cover of claim 21, wherein the cover is welded onto the well plate.
24. The cover of claim 21, wherein the bottom layer of the cover is airtight connected to the well plate material around a container of the well plate.  
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25. A method of retrieving or filling a liquid in a well plate having a plurality of containers for liquids, the method comprising the steps of:  
providing the well plate with a cover arranged on top of the well plate, said cover comprising a plurality of recloseable apertures sealing the containers;  
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opening the recloseable aperture of at least one container of the well plate;  
retrieving or filling the liquid from the opened container or into the opened container; and  
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closing the opened aperture after retrieval or filling.
26. A cover for sealing a container, comprising:  
at least two layers arranged over each other for sealing the container and being structured to form a recloseable aperture of the cover; and  
wherein each layer comprises a structure allowing to access, when the

structures overlap, through the layers into the container.